Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application.

Listing of Claims

1. (Original) Method for the manufacture and transmissive irradiation of a sample, comprising the steps of:

A Providing a particle-optical system having an internal low-pressure chamber and suitable for the generation of an electron beam and an intersecting ion beam in said chamber;

B Providing a specimen within the chamber, carried by a manipulator;

C Irradiating the specimen with the ion beam so as to cut a sample from the specimen;

D Relatively displacing the sample thus cut to a sample holder than can be manipulated;

E Attaching the sample to the sample holder;

F Using an electron beam to perform transmissive irradiation of the sample thus attached to the sample holder,

characterized in that step F is performed in the low-pressure chamber of the particle-optical system according to step A.

2. (Original) Method according to claim 1, characterized in that, during step F, an electron detection surface is positioned at the side of the sample opposite to the electron beam.

3. (Currently Amended) Method according to claim 1~~ or 2~~, characterized in that, after executing step E, the sample is irradiated with the ion beam, for the purpose of further processing the sample.

4. (Currently Amended) Method according to claim 1~~, 2 or 3~~, characterized in that, after execution of step E, the sample holder is rotated about a rotational axis that is perpendicular to the electron beam and to the ion beam.

5. (Original) Method according to claim 4, characterized in that the rotational axis extends through the point of intersection of the electron beam and the ion beam.

6. (Currently Amended) Method according to claim ~~4 or 5~~, characterized in that rotation about the rotational axis is performed, in combination with rotation of the sample holder about a manipulator rotational axis that extends parallel to said rotational axis, through a range of at least 180 degrees.

7. (Original) Particle optical system, in particular for application in conjunction with a method according to one of the preceding claims, comprising a low-pressure chamber containing manipulator means for at least two objects to be irradiated, an electron source and an ion source for the purpose of allowing irradiation of an object, carried by the manipulating means, using an electron beam and an ion beam, respectively, the manipulating means comprising a number of first manipulation parts, which are movable relative to one another and collectively movable relative to the electron beam and the ion beam according to a first set of degrees of freedom, an extremal one of which first manipulation parts comprises a first object carrier, for allowing, in the case of a first object carried by the first object carrier and at a first position of the manipulating means, reflective irradiation of said first object using an electron beam and/or irradiation of said first object using an ion beam, the manipulating means further comprising at least one second manipulation part comprising a second object carrier, the system further comprising displacing means for relatively displacing an object from the first object carrier to the second object carrier, characterized in that the manipulating means are embodied so as to allow, in the case of a second object carried by the second object carrier and at a second position of the manipulating means, transmissive or reflective irradiation of said second object by an electron beam and/or irradiation of said second object by an ion beam.

8. (Original) System according to claim 7, characterized in that the second manipulation part is movable in at least one further degree of freedom with respect to the electron beam and the ion beam, as well as with respect to a remaining portion of the manipulating means.

9. (Original) System according to claim 8, characterized in that the at least one further degree of freedom is a rotation about a rotational axis that extends perpendicular to the electron beam and to the ion beam.

10. (Original) System according to claim 9, characterized in that the rotation about the rotational axis can occur through a range of at least 180 degrees, combined, if desired, with rotation about a manipulator rotational axis that extends parallel to said rotational axis.

11. (Original) System according to claim 10, characterized in that the rotational axis extends through the point of intersection of the electron beam and the ion beam.

12. (Currently Amended) System according to claim ~~8, 9, 10 or 11~~, characterized in that the motion according to said at least one further degree of freedom can only occur in combination with motion according to one degree of freedom of the first set of degrees of freedom.

13. (Currently Amended) System according to one of the claims 7 ~~to 12~~, characterized in that the system comprises an electron detection surface at the side of the second object – carried by the second object holder – that is remote from the electron beam.

14 (Original) System according to claim 13, characterized in that the electron detection surface is collectively movable with the manipulating means in the direction extending between the first position and the second position of the manipulating means.

15. (Original) System according to claim 14, characterized in that the electron detection surface and the manipulating means are movable independently of one another in the direction extending between the first position and the second position of the manipulating means.

16. (Currently Amended) System according to claim 14 ~~or 15~~, characterized in that the resilience of spring means causes the electron detection surface to move together with the manipulating means from the first position to the second position, and a stopping contact between the manipulating means and a part rigidly connected to the electron detection surface causes the electron detection surface to move together with the manipulating means from the second position to the first position.

17. (Original) System according to claim 16, characterized in that, in the second position of the manipulating means, there is play between the manipulating means and the part rigidly connected to the electron detection surface.

18. (New) Method according to claim 2, characterized in that, after executing step E, the sample is irradiated with the ion beam, for the purpose of further processing the sample.

19. (New) Method according to claim 2, characterized in that, after execution of step E, the sample holder is rotated about a rotational axis that is perpendicular to the electron beam and to the ion beam.

20. (New) Method according to claim 3, characterized in that, after execution of step E, the sample holder is rotated about a rotational axis that is perpendicular to the electron beam and to the ion beam.

21. (New) Method according to claim 5, characterized in that rotation about the rotational axis is performed, in combination with rotation of the sample holder about a manipulator rotational axis that extends parallel to said rotational axis, through a range of at least 180 degrees.

22. (New) System according to claim 9, characterized in that the motion according to said at least one further degree of freedom can only occur in combination with motion according to one degree of freedom of the first set of degrees of freedom.

23. (New) System according to claim 10, characterized in that the motion according to said at least one further degree of freedom can only occur in combination with motion according to one degree of freedom of the first set of degrees of freedom.

24. (New) System according to claim 11, characterized in that the motion according to said at least one further degree of freedom can only occur in combination with motion according to one degree of freedom of the first set of degrees of freedom.

25. (New) System according to one of the claims 8, characterized in that the system comprises an electron detection surface at the side of the second object – carried by the second object holder – that is remote from the electron beam.

26. (New) System according to one of the claims 9, characterized in that the system comprises an electron detection surface at the side of the second object – carried by the second object holder – that is remote from the electron beam.

27. (New) System according to one of the claims 10, characterized in that the system comprises an electron detection surface at the side of the second object – carried by the second object holder – that is remote from the electron beam.

28. (New) System according to one of the claims 11, characterized in that the system comprises an electron detection surface at the side of the second object – carried by the second object holder – that is remote from the electron beam.

29. (New) System according to one of the claims 12, characterized in that the system comprises an electron detection surface at the side of the second object – carried by the second object holder – that is remote from the electron beam.

30. (New) System according to claim 15, characterized in that the resilience of spring means causes the electron detection surface to move together with the manipulating means from the first position to the second position, and a stopping contact between the manipulating means and a part rigidly connected to the electron detection surface causes the electron detection surface to move together with the manipulating means from the second position to the first position.